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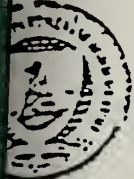
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DEPARTMENT OF AGRICULTURE  
OFFICE OF THE SECRETARY  
WASHINGTON, D. C. 20250

JUL 23 1982

Honorable George Bush  
President of the Senate  
Washington, D.C. 20510

Dear Mr. President:

In response to Section 1427 of the National Agricultural Research,  
Extension and Teaching Policy Act of 1977, as amended, we are  
transmitting to Congress a "Plan for A Human Nutrition Research and  
Information Management System." The plan was developed jointly by  
the Departments of Agriculture and Health and Human Services.

Sincerely,

John R. Block  
Secretary of Agriculture

Sincerely,

Richard S. Schweiker  
Secretary of Health and  
Human Services

Enclosure

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INTRODUCTION:

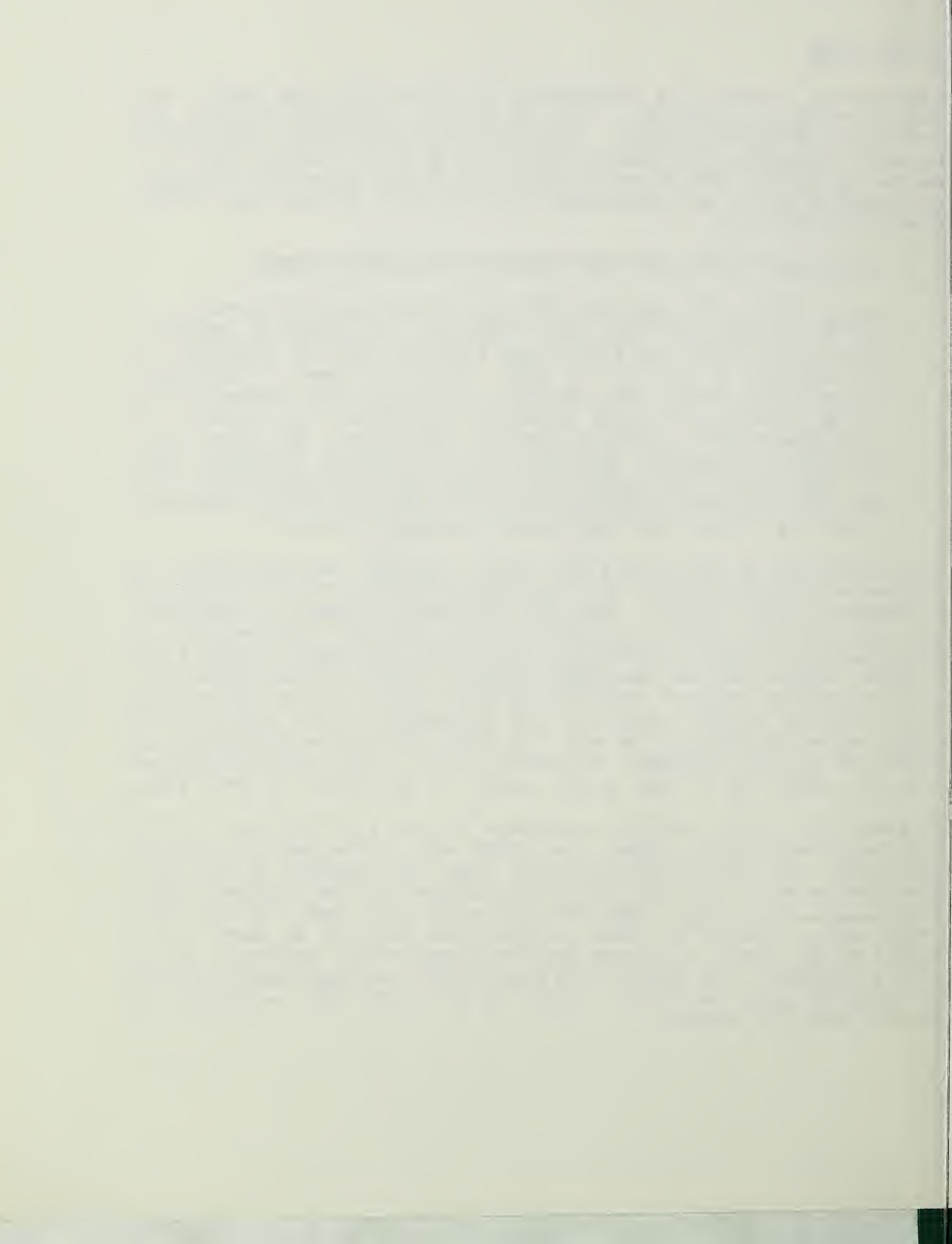
Congress has directed the Secretaries of Agriculture and Health and Human Services to formulate a plan for a Human Nutrition Research and Information Management System. Section 1427 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3177), as amended by Section 1425 of the National Agricultural Research, Extension, and Teaching Policy Act Amendments of 1981 (Title XIV of P.L. 97-98) provides as follows:

HUMAN NUTRITION RESEARCH AND INFORMATION MANAGEMENT SYSTEM

Section 1427. The Secretary [of Agriculture] and the Secretary of Health and Human Services shall formulate and submit to Congress, within one hundred and eighty days after the date of enactment of this section, a plan for a human nutrition research management system. This system shall be based on on-line data support capability allowing for fiscal accounting, management, and control of cross-agency human nutrition research activities. The plan shall provide for management activities of all agencies managing funds for human nutrition research activities under existing authorities and contain recommendations for any additional authorities necessary to achieve a human nutrition research management system.

The Secretaries of Agriculture and Health and Human Services agree to cooperate in the development of a Human Nutrition Research and Information Management (HNRIM) system. The two departments propose to implement this plan with the advice and assistance of the Joint Subcommittee on Human Nutrition Research (JSHNR) of the Federal Coordinating Council for Science, Engineering and Technology (FCCSET). Initially the system will use the existing computer facilities of HHS. However, existing computer facilities and systems supporting HNR management in the Agencies are under review to determine the best long range approach to supporting the objectives of this management information system. Total costs associated with the operations of the system cannot be determined at this time.

To assure the widest possible acceptance of, and participation in, the information management system, the JSHNR will serve as an advisory committee. The JSHNR currently exists under the auspices of the Subcommittee on Health and Medicine and the Subcommittee on Food and Renewable Resources (recently named the "Subcommittee on Food, Agricultural, and Forestry Research"). These subcommittees function as part of the FCCSET of the Office of Science and Technology Policy, Executive Office of the President. The JSHNR will be asked to keep the Departments informed of standards which have been adopted by the JSHNR and new efforts in Federal nutrition research.





The JSHNR has been active in reviewing Federal human nutrition research (HNR) activities and their coordination, and in identifying critical research issues. Attachment 1 presents a summary of JSHNR activities and accomplishments. Current activities of the JSHNR are directly related to the present mandate. Consequently, it is appropriate that the JSHNR be asked to assume an advisory role in formulating the HNRIM System.

#### PREVIOUS ACTIVITIES OF JSHNR

In order to develop a data base and information management system, four components must be in place: (1) a definition of human nutrition research suitable for activity identification and data retrieval; (2) a classification system that permits an aggregate overview of research areas; (3) a list of data elements that are to be included in the data base; and (4) a knowledge of coordinating activities among research efforts. All four of these components have been developed by the JSHNR, and will be incorporated into the HNRIM System.

- (1) A definition of human nutrition research suitable for project identification and data retrieval has been developed by the JSHNR and agreed upon by all the member agencies (Attachment 2, pages 3-4). This definition has been used successfully to tabulate nutrition research expenditures of the member agencies since FY 1979 (Attachment 2, pages 987-988).
- (2) A classification system suitable for aggregating research has been developed by the JSHNR (Attachment 3). The Subcommittee will review the system in order to ensure that it is responsive to the Congressional mandate.
- (3) The data elements to be included in a nutrition research information data base have been considered by the JSHNR, and a list of these elements (Attachment 4) has been agreed on by the members. The data elements serve to identify the project, the principal investigator, the sponsoring agency, the total dollar amount expended by the activity and the portion of that amount that is nutrition research, and the categories classifying the research areas addressed.
- (4) The JSHNR, in its December 1980 report, identified 48 inter-departmental coordinating activities in human nutrition research (Appendix 4 of Attachment 2).

Having established an effective focus for the review and coordination of Federal nutrition research activities, the JSHNR is uniquely suited to serve in an advisory capacity to the HNRIM System.

#### INFORMATION MANAGEMENT SYSTEM

The information management system will consist of an on-line computerized data base which will allow for fiscal accounting, management, and control of cross agency human nutrition research activities. The projects placed





in the system by various Federal agencies will be required to fall within the definition for HNR and each of the data elements shown in Attachment 4 will have to be submitted.

Each agency will report to the HNRIM all the required data for each project with a nutrition research component. The data will be entered into the combined Federal on-line data system that will contain the agreed upon data elements for all projects with nutrition research components of all the participating agencies.

The HNRIM will maintain a data dictionary describing the information elements available in each agency's system and information on how to access participating agencies' data bases for this information.

Each agency will continue to be responsible for the management and control of HNR in its organization, including the review and approval of agency research projects and their documentation in the information system. Thus, the HNRIM would be based on decentralized components, with each agency retaining responsibility for the maintenance of current information on its activities in HNR.

The Departments will issue annual reports of Federally supported human nutrition research by July 31 of each year, commencing in 1983, covering the previous fiscal year. These annual reports will include:

- o Compilations of annual Federal expenditures in human nutrition research and research training
- o results of conferences and workshops sponsored by the Departments and JSHNR
- o progress reports on major nutrition research studies reported at the JSHNR sponsored annual meetings of the directors of the NIH-Clinical Nutrition Research Units (CNRU), the intramural laboratories of USDA, NIH, FDA, the VA clinical nutrition and alcohol research programs, and the managers of DOD and NASA programs involving nutrition research
- o recommendations regarding areas of nutrition research that require changed emphasis or coordination.

Annual reports will be reviewed by the JSHNR and it will continue the review process that it has utilized in the past in order to ensure clearance by all involved agencies.

#### CONCERNS OF AGENCIES

The question of data acquisition has been discussed by the JSHNR. Some agencies, notably NIH, ADAMHA, and HSA, within DHHS; ARS and Competitive Grants within USDA; DOD; and NASA have no difficulty in identifying individual projects with nutrition research components and obtaining the needed data. Others have expressed two concerns: (1) that the resources





needed to review all relevant research activities to determine which have nutrition research components and to establish the size of those components on a continuing basis may not be available, and (2) that accounting problems are perceived to exist when a given project, funded from a line item other than "nutrition," is identified as having a nutrition research component.

Some agencies may have to expend appreciable resources to identify nutrition research activities supported by funds that are commingled with state funds (e.g., USDA formula grants for research support of land grant institutions), or being carried out through support provided by decentralized arms of the agencies (e.g., by local VA hospitals and by AID missions overseas). The costs to the agencies of identifying such activities are significant. As stated in Dr. Keyworth's letter (Attachment 5):

Those who believe in, and encourage, greater cooperation and coordination among federal agencies should understand that such efforts are not without costs. Effective coordination requires a significant commitment of time and money--real and opportunity costs which must be taken into account when considering the imposition of new coordination mechanisms and planning activities.

#### SUMMARY

This plan has been developed and submitted pursuant to the directive contained in Section 1427 of the National Agricultural Research, Extension and Teaching Policy Act of 1977, as amended. The following table summarizes the actions and time table for the implementation of the plan.

#### IMPLEMENTATION SCHEDULE

	1982		1983				1984			
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
1. Comments on categories by non-federal scientists & Congress		-----X								
2. Initial data collection by agencies			- - - - -							X
3. Reporting deadline for previous year's agency expenditures			- - - - -		X	- - - - -		X	- - - - -	
4. On-line Data System Operational			- - - - -							X
5. Annual Reports			- - - - -		X	- - - - -			X	- - - - -



The Office of Science and Technology Policy (OSTP) in the Executive Office of the President has recognized the importance of coordinating all Federal programs in nutrition research; and in 1978 established the Joint Subcommittee on Human Nutrition Research (JSHNR) under the Federal Coordinating Council on Science, Engineering, and Technology, OSTP. Responsibility for Federally supported nutrition research and education and support of the nutritional aspects of the health care delivery system is found largely in DHHS and USDA. However, these are not the only Government entities involved. Included in the Subcommittee's membership are representatives of the U. S. Department of Agriculture (USDA), Department of Health and Human Services (DHHS), Department of Commerce-National Oceanic and Atmospheric Administration (DOC-NOAA), Department of Defense (DOD), International Development Cooperative Administration-Agency for International Development (IDCA-AID), Federal Trade Commission (FTC), National Aeronautics and Space Administration (NASA), and the Veterans Administration (VA). The two major Departments, USDA and DHHS, cochair the Subcommittee which has become the Federal focus for the coordination of human nutrition research.

The scope of the Subcommittee as stated in its charter (Appendix 1 of Attachment 2) is as follows:

"The Subcommittee is concerned with:

- (1) all Federally conducted research on nutrition with emphasis on human nutrition; and
- (2) professional personnel needs in nutrition research and education.

The purpose of the Subcommittee is also stated in its charter:

The purpose of JSHNR is to increase the overall effectiveness and productivity of research efforts in nutrition. In fulfilling this purpose, the Subcommittee will:

- a. Improve planning, coordination, and communication among Federal agencies engaged in research on nutrition
- b. Develop and update plans for Federal research programs to meet current and future domestic and international needs for nutrition
- c. Collect, compile, and disseminate information on nutrition research
- d. Prepare reports describing activities, findings, and recommendations of the Subcommittee.







the first two years of its existence, the Subcommittee:

- o Established a definition of human nutrition research accepted by all member agencies (pages 987-988 of Attachment 2)
- o Completed a thorough review of the legislative authorities and interdepartmental coordinating mechanisms of the member agencies in human nutrition research, research training, and education (see Appendices 3 and 4 of Attachment 2)
- o Reviewed and considered the advances in medical sciences and improvements in sanitation and nutrition that have contributed to major improvements in health status (Section II of Attachment 2)
- o Published its first report in December, 1980, titled Federally Supported Human Nutrition Research, Training, and Education: Update for the 1980s. I. Human Nutrition Research and Training (Attachment 2.) The report includes a review of legislative authorities, coordinating mechanisms, and programs in human nutrition research, and contains six major recommendations. Five of these address critical research and training areas. The sixth recommendation focuses on the coordination of Federal programs and its first four parts are particularly relevant to the Congressional mandate. They are:
  - a. Review the interdepartmental coordination in human nutrition research of its member agencies in greater depth, and make recommendations to simplify and strengthen the coordination, particularly at levels above that of specific programs.
  - b. Initiate development of a data base on all Federally-supported human nutrition research and research training activities (including intramural, extramural, collaborative, and formula grant funded activities) in order to facilitate coordination, planning, and reporting.
  - c. Promote the development of joint workshops, conferences, and educational programs when appropriate.
  - d. Establish an annual meeting at which the Directors of the NIH Clinical Nutrition Research Units, the intramural laboratories of USDA, NIH, and FDA, the VA clinical nutrition and alcohol research programs, and the managers of DOD and NASA programs with nutrition research components will discuss research progress and future research needs. Such discussions should lead to increased coordination and collaboration among the intramural programs of the USDA, NIH, FDA, DOC, NASA, DOD, and VA. Furthermore, it may indicate the need for the development of joint Program Announcements and Requests for Applications and Proposals (RFAs and RFPs) by USDA, NIH, FDA, NASA, and NSF. The JSHNR is uniquely qualified to determine specific needs for such joint action by cooperating agencies and assist in the development of mechanisms for implementation.





Since the release of that report the Subcommittee has:

- o Begun the implementation of Recommendation 6d of its report by scheduling a joint meeting of the directors of the NIH-Clinical Nutrition Research Units (CNRU), the intramural laboratories of USDA, NIH, FDA, the VA clinical nutrition and alcohol research programs, and the managers of DOD and NASA programs in nutrition research for December of 1982 and convening a task force of these directors on May 10, 1982, to plan the agenda for the December meeting.
- o Co-sponsored, with CDC, FDA, and NIH, a Conference on the Assessment of Nutritional Status held at NIH on September 16-18, 1981. The conference, attended by approximately 120 Federal and non-Federal scientists, highlighted the current state of the art in the assessment of nutritional status, emphasized currently available methodology, its adequacy and shortcomings, and focused on research needed to develop adequate methods for nutritional assessment.
- o Developed two additional reports: Federally Supported Human Nutrition Research, Training, and Education: Update for the 1980s: II. International Human Nutrition Research, and III. Nutrition Education Research and Professional Personnel Needs for Nutrition Education of Professionals and the Public, both to be released in the spring of 1982.





Classification System for JSHNR Data Retrieval of Nutrition Projects

(As agreed upon at JSHNR Meeting of June 8, 1981  
and revised February 8, 1982)

The attached list of 31 classification categories represents the decision of the Subcommittee at their meeting of June 18, 1981 and its revision on February 8, 1982. Further revisions may be forthcoming, pending review by relevant Federal Agencies.

The classification system is based upon the previously approved definition of human nutrition research. The system is designed (when read together with the definition) to permit coding personnel to classify projects with a minimum of confusion, or questions of definition.

The categories are divided into the same three major classes as the definition. (1. Research in the biomedical and behavioral sciences, 2. Research in food sciences, and 3. Research in nutrition education.) A fourth class covering research into the effects of government policy and socioeconomic effects on food intake and human nutrition has been added in order to complete the system.

These 31 categories permit the classification, usually into one category, of any nutrition research project falling within the definition and yet restricts the number of categories to a manageable number.



Research in the Biomedical and Behavioral Sciences]

A. Normal Nutritional Requirements Throughout the Life Cycle]

[The following five categories are included because of the importance to health promotion of establishing normal nutritional requirements throughout the life cycle, and the differing needs of individuals at various stages of the life cycle.]

1. Maternal Nutrition
2. Infant and Child Nutrition (0-12 years)  
(including the low birthweight infant)
3. Adolescent Nutrition (13-18 years)
4. Adult Nutrition (19-51 years)
5. Nutrition of the Aging (51+ years)

B. Diseases and Conditions]

[The role of nutrition in the amelioration and treatment of diseases and conditions is covered by the following 10 categories.]

6. Cardiovascular Disease and Nutrition
7. Cancer and Nutrition
8. Other Diseases and Nutrition  
(e.g., osteoporosis, diabetes, etc.)
9. Trauma (Including Burns) and Nutrition
10. Infection--Immunology and Nutrition
11. Obesity, Anorexia, and Appetite Control
12. Genetics and Nutrition
13. Nutrition and Function  
(Includes Mental, Psychomotor, and Work Performance)
14. Nutrient Interactions  
(Includes nutrient-nutrient interactions, nutrient-drug interactions, nutrient-toxicant interactions, and nutrient toxicity)





15. Nutritional Status

(Includes methods for the determination of nutritional status and surveillance: dietary history and food consumption, biochemical determinants, anthropometry, and clinical examination)

[C. Nutrient Metabolism and Metabolic Mechanisms at the Cellular and Subcellular Levels]

[The following eight categories permit classification of basic research by nutrient variables.]

16. Carbohydrates

17. Lipids (Fats and Oils)

(Including essential fatty acids, lipo- and apo-proteins)

18. Alcohols

(Including ethanol, sorbitols, and other alcohols used as components of synthetic and semi-synthetic foods)

19. Proteins and Amino Acids

(Including essential as well as non-essential amino acids such as taurine and carnitine)

20. Vitamins

(Including Vitamin A, C, B<sub>6</sub>, B<sub>12</sub>, D, E, K, Thiamin, Riboflavin, Niacin, Folic acid, Biotin, and Pantothenic Acid)

21. Minerals and Essential Trace Elements

(Including calcium, phosphorus, magnesium, iron, zinc, iodine, copper, manganese, fluoride, chromium, selenium, and molybdenum)

22. Water and Electrolytes

(Including sodium, potassium, and chloride)

23. Fiber

24. Other Nutrients In Food

(Including cobalt, nickel, vanadium, silicon, tin, arsenic, cadmium, choline, lecithin and various growth factors)

[II. Research in Food Sciences]

[The following four categories encompass efforts in the nutritional aspects of food sciences.]

25. Food Composition

(Including nutritional quality, nutrient content, and research on methods of analysis for nutrients and fiber)



26. Bioavailability of Nutrients  
(Including methods for the determination of bioavailability of nutrients)

27. Effects of Technology on Acceptability and Nutritional Characteristics of Foods and Diets  
(Including the beneficial and adverse effects of varietal and species differences, harvest and post-harvest technology, retail food practices, food processing, handling, preservation, and home cooking.)

28. Food Consumption Surveys

### [III. Research in Nutrition Education]

[The following two categories encompass research in nutrition education.]

29. Studies of Dietary Practices, Food Consumption Patterns, and Their Determinants.

30. Studies on Methods for Informing and Educating the Public About Nutrition, Health, and Dietary Practices and for Countering Nutrition Misinformation  
(Includes studies on methods for informing and educating professionals in these areas.)

[IV.] -- 31. Effects of Government Policy and Socioeconomic Factors on Food Consumption and Human Nutrition.





ELEMENTS OF HUMAN NUTRITION RESEARCH INFORMATION DATA SYSTEM  
TO BE SUPPLIED BY SPONSORING AGENCY

1. Project Number - A unique identifying number assigned to each activity.  
(This number will be assigned by each Department or agency. In most cases the ID number will incorporate codes identifying the administering organization and the type of award.)
2. Project Title - Title of the activity.
3. Name of Investigator - Name of the scientist responsible for the execution of the research project (Principal Investigator).
4. Organization Name - Name of the Organization in which the investigator named in item 3 is located.
5. City and State - The geographic location of organization in  
(or Country) Name item 4.
6. Congressional District - of the organization in item 4.
7. Activity Type - A code to indicate whether the activity is intramural, extramural, competitive award, block grant, etc.
8. Fiscal Year - The fiscal year being reported--funds reported must be from this fiscal year.
9. Amount Awarded - Total dollars expended in FY reported in item 8.
10. Nutrition Percent - The percentage of the amount reported in item 9 that corresponds to the nutrition component of the activity.
11. Classifications - A list of those of the research classification areas that identify major components of the nutrition research activity. (At least one area must be identified.)
12. Abstract - A brief synopsis giving the purposes and objectives of the research.





February 5, 1982

Honorable Charles A. Bowsner  
Comptroller General of the United States  
Washington, DC 20548

Mr. Bowsner:

I am pleased to comment on the GAO draft report "Progress in Federal Human Nutrition Research Should Continue with Planning and Coordination Improvements."

The draft report reviews the recent history of coordination efforts among the major federal agencies involved in human nutrition research and proposes steps to continue, extend, and formalize those efforts. I am pleased that the report recognizes the excellent progress made during the last five years in coordination of federal human nutrition research activities, the lead role played by the Office of Science and Technology Policy (OSTP) in that progress, and the commitment and hard work of the members of the Joint Subcommittee on Human Nutrition Research (JSHNR) as evidenced in their December 1980 report on human nutrition research training.

The draft GAO report contains two recommendations to the Director of OSTP. The first recommendation is for the Director of OSTP to direct the JSHNR to develop a federal nutrition research plan by developing specific goals for federal human nutrition research programs, and by identifying responsibilities of the federal departments and agencies and the resources and time required to accomplish those goals. I concur in principle with this recommendation and receive it to be consistent with the policies of this Administration and the intention of the members of the Joint Subcommittee. That Subcommittee has demonstrated its commitment to effective coordination by: agreeing on a common definition of human nutrition research; describing the existing nutrition research activities and expenditures of federal departments and agencies; identifying critical research issues; preparing reports on international nutrition research and nutrition education and professional manpower; organizing a conference to discuss research progress and identify research needs; and developing a common computerized



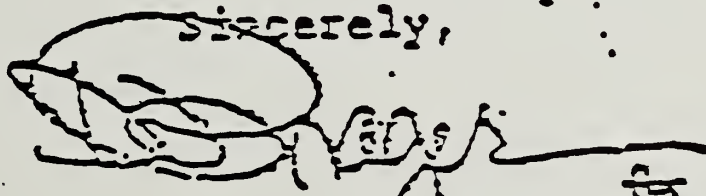


se varied activities provide the groundwork for improved  
nning of federal human nutrition research. It is the  
ention of the JSNHR to update and expand its 1980 report  
to use that report as the vehicle for evolving a broad  
ederal nutrition research plan within which the individual  
ncies can develop separate plans consistent with their  
isolated responsibilities and missions. To the degree  
sible and appropriate, the federal plan will delineate  
ncy responsibilities and necessary resources. We agree  
t the process of preparing such a plan will greatly  
ance federal nutrition research programs.

second GAO recommendation to the Director of OSTP urges  
t, in developing a nutrition research management system,  
ernal input be broadly solicited. I concur fully in this  
ommendation and will encourage the members of the JSNHR  
follow through in their plan to involve the various  
levant external communities in the development and imple-  
tation of the data retrieval system now envisioned.

other comment. On page 22, the text indicates that an  
P official referred to the cost of JSNHR activities as  
minimal." I wish to clarify that the term "minimal" was  
nt to refer to the direct cost of these activities to  
P. Since the responsibility for the operation of the  
NHR is assigned to the agencies, our costs are minimal.  
ever, the cost to the agencies is considerable. Those  
o believe in, and encourage, greater cooperation and  
ordination among federal agencies should understand that  
ch efforts are not without cost. Effective coordination  
quires a significant commitment of time and energy -- real  
d opportunity costs which must be taken into account when  
nsidering the imposition of new coordination mechanisms  
d planning activities.

Sincerely,



G. A. Keyworth

Science Advisor to the President

cc:

- 1. Simopoulos
- 1. Brandt
- 1. Hegsten
- 1. Meyers





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